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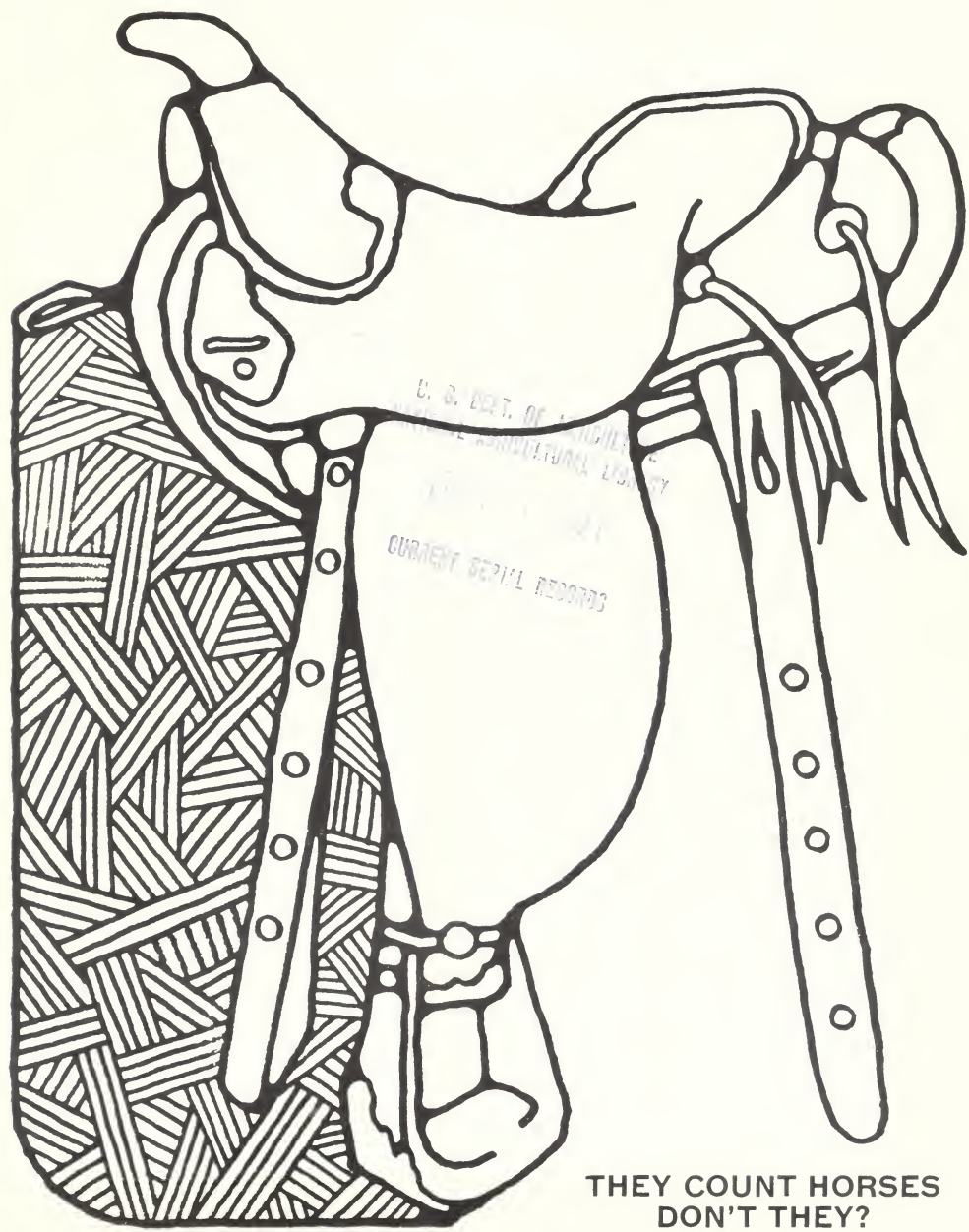
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THEY COUNT HORSES
DON'T THEY?

THEY COUNT HORSES DON'T THEY?

The old gray mare has a new figure, slim and sleek. It's brought her new popularity.

Farmers and cavalymen aren't reverting to horsepower, but urbanites are discovering the pleasures of riding on wooded trails, in cross-country hunts, or simply owning a pony for the kids. The heavy draft horse that pulled wagons or farm equipment was obsolete long ago. Today there are increasing numbers of light horses for riding, showing, and racing.

Sources in the horse trade say that the Nation's herd doubled in the sixties. Just keeping that pace in the seventies, the horse could double again—to 14 million head—by 1980.

The Statistical Reporting Service estimated the number of horses and mules on farms each year for nearly a century. But the 25 million head of 1920 had dwindled to 3 million when the 1959 Census of Agriculture was taken. And the number of colts under 2 years old—basis for future herds—were less than a tenth of what they'd been 40 years earlier. Acreage to produce horse feed shrank from 80 million acres in 1921 to only 4 million by 1961. SRS stopped estimating horse numbers in 1960.

Horses are still around in sizable numbers, however. Only they, like many farmers, have moved to town. Riding stables, saddle clubs, boarding farms, and fox hunts show increasing popularity. Millions of people enjoy the hundreds of horse shows and

rodeos held each year, and racing is a top spectator sport.

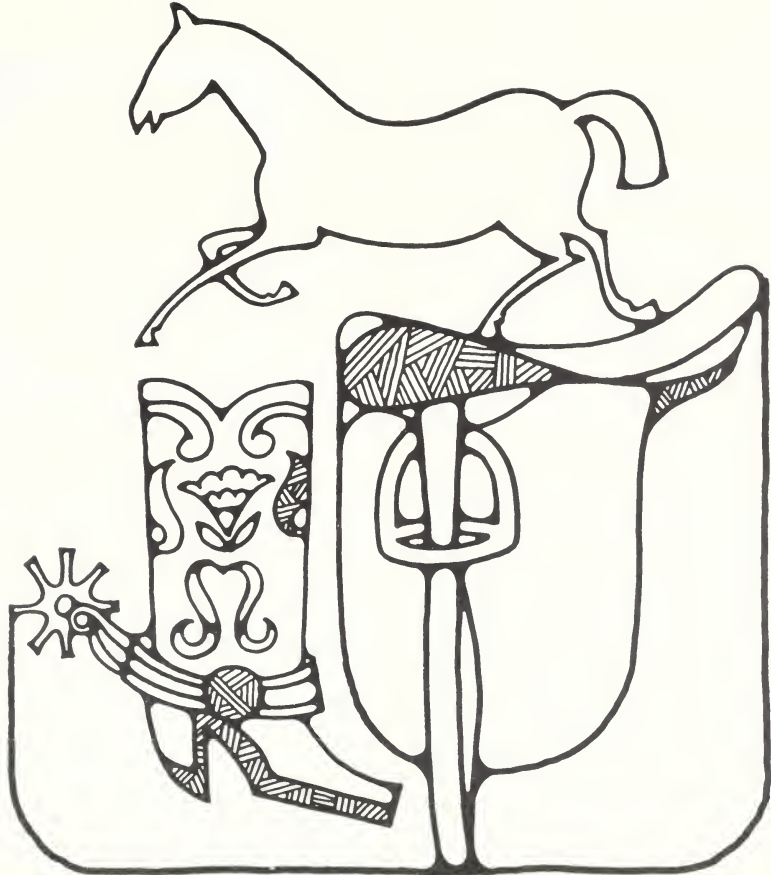
But without reliable estimates, horse breeders, feed suppliers, trade groups, and State agencies are at a loss to know how many horses there were, their value, and location. Information of this kind helps determine the amount of feed needed, and investments in equipment and structures. It also aids in planning recreation needs, such as urban bridle paths and country trails.

Several States have asked SRS to assist in making horse surveys. The studies usually are paid for by State agricultural funds or income from racetracks.

New Jersey sponsored a survey in 1961 which estimated 18,270 head—mostly racers, ponies, and other pleasure stock. New York State's survey in 1964 listed 125,000 riding horses and other equines. And Virginia statisticians turned up nearly 100,000 horses, mostly light breeds. The Commonwealth's number of mules and donkeys was put at 13,216.

Interestingly, the Virginia study found the membership in hunting and riding clubs at 4,313, and over 90 4-H Clubs had groups working with horses.

Pennsylvania's Crop Reporting Service estimated 85,000 horses and mules on and off farms in 1966-67 with a value of \$3.4 million. Pleasure stock outnumbered work animals nearly 8 to 1, despite the fact some Keystone State farms are operated by



members of a religious group still relying on horses for fieldwork and transportation.

Other recent surveys involving SRS estimated 310,000 pleasure horses in California, 143,000 in Georgia, and Kentucky's thoroughbred breeding stock to be worth about \$125 million.

The U.S. horse population explosion is likely ringing up annual sales of over \$1 billion for riding equipment, feed, medicine, and other essentials—based on the Pennsylvania survey. For example, the Pennsylvania study estimated the feed bill for only 85,000 horses and mules at \$13 million a year, blacksmithing at \$2.1 million, and \$2 million for veterinary charges. Riding habits, saddles and bridles, and other accessories added another \$3 million to the cost of owning a horse.

Riding into the sunset really caught the fancy of some horse lovers. The

horse population has been moving west, the industry says. The 1959 Census of Agriculture found 33 percent of the Nation's horses on farms in 7 Southeastern States. An industry judgment says 28 percent were in that area in 1969, which includes horses on places not counted as farms.

The number on the West Coast had jumped from 5 to 9 percent during the decade. Intermountain horse numbers increased from 13 to 16 percent of the country's total. Other regions held relatively stable, according to trade estimates.

Texas still ranks No. 1, but California replaced North Carolina in second place for horses. One Southern State, Florida, went against the westward trend and got into the top 10 horse States because of increased popularity of racetracks and other recreational enterprises.

USEFUL WASTES

Manure disposal plagues many livestock producers, especially dairymen.

Not only are their herds growing, but fewer cows are pastured and more are being kept under confinement. Manure, once naturally deposited on pasture, range, and croplands, now has to be transported away.

In Wisconsin, our No. 1 dairy State, about two-thirds of the cow manure, nearly 30 million tons a year, has to be transported.

But many Wisconsin dairymen are using a relatively new method of waste disposal: the liquid manure system.

Basically, the system consists of:

- Tanks to store raw manure to which water has been added.

- Machines to agitate the mixture.

- Pumps to draw it out when the time comes to apply it on cropland.

- Tractor and spreader.

Where farmers must confine livestock into small areas, the liquid manure system can be practical and economical. Hog farmers, for example, use the system successfully.

Economic feasibility depends on the value of the manure, farm operating costs, and other variables, according to a survey made on Wisconsin farms by the University of Wisconsin in cooperation with USDA's Economic Research Service.

In the Wisconsin study, the typical cow weighed 1,400 pounds, and produced 20.4 tons of manure a year. Some farms had the liquid system only; others used a combination of disposal methods.

Liquid systems generally require a higher investment in equipment (twice that for conventional systems), but they also result in greater savings on labor. And they salvage more of the nutrient value of the manure.

In the Wisconsin study, the conven-

tional system was found to be cheaper to operate for dairy herds of fewer than 50 cows. And at the 50-cow level, costs over returns were the same for the two systems, taking into account the value of nutrients in the manure.

But for herds of more than 50 cows, liquid disposal became more economical, mainly due to the higher value of liquid manure. Its value averaged \$32 annually per cow, or at least \$12 more than a well operated conventional setup.

Liquid storage of a manure-water mixture actually improves the fertilizer quality of cattle excrement, because a high proportion of the nutrients can be recovered from both the solid and liquid wastes.

The system conserves about 75 percent of the original nitrogen and 90 percent of the phosphates and potash. Comparable figures for conventional disposal methods are 40 and 65 percent, respectively.

One ton of liquid manure has 1.6 times more nutrient value than the raw product.

In addition, liquid manure can be held for sustained periods—with little reduction in nutritive value—until soil and temperature conditions are right for spreading on fields.

The Wisconsin study group recommends emptying the storage tanks twice yearly in April and October. If farmers apply the manure to pasture and cropland then, they should get the optimum in fertilizer values, yet keep storage costs to a minimum.

This system is particularly advantageous in free stall barns where there is no bedding to absorb the liquid part of the excrement. The solid-liquid mixture is easily removed by scraping the wastes through slots in the barn floor and into storage tanks.



SPOTLIGHT ON NEW YORK

New York—a leader in manufacturing, finance, fashion, art, communications, and agriculture.

Agriculture? Few people nowadays realize the Empire State is still a big farm State, says Statistician William Bair, in charge of the Crop and Livestock Reporting Service in Albany.

But the facts are that New York is a billion dollar agricultural producer that ranks in the top two for:

Commodity: *New York's share
of U.S. output,
1969¹
(percent)*

Milk -----	8.9
Cheese ² -----	7.3
Ice cream -----	9.4
Apples -----	32.5
Grapes -----	3.1
Tart cherries -----	10.2
Mushrooms -----	2.7
Maple syrup -----	33.7

¹ Preliminary. ² Excluding full-skim American cheese and cottage cheese.

The Empire State is also among the top five producers of fresh vegetables, potatoes, corn silage, cut flowers, and veal.

Dairying has been the most valuable farm enterprise in New York ever since the 1850's (when it replaced wheat in the No. 1 spot). Currently sales of dairy products account for over half the

total cash receipts from marketings.

Milk cow numbers, remarkably stable between 1930 and 1960 at approximately 1.3 million, have been declining during the past decade. In 1969 they stood at slightly more than a million head.

Milk production per cow, though, has risen almost without fail since 1924, the first year annual output per cow was recorded. Increases were moderate until the late 1940's; since then they've been averaging a whopping 200 pounds per cow per year.

State average production—6,670



pounds per cow in 1949—totaled 10,000-plus pounds in 1969. Back of these dramatic gains: changes in technology involving feeding, breeding, and herd health and management practices which have been rapidly applied to New York dairying. Also, gone are many of the small herds which tend towards lower production rates.

Total milk output on Empire State farms came to more than 11 billion pounds in the mid-1960's. It's since dropped to about 10.3 billion, because the decline in cow numbers outpaced productivity gains.

Bair reports New Yorkers themselves drink up two-thirds of the State's milk production and consume much of the remaining third in locally manufactured dairy products.

Veal production is an important sideline on many dairy farms. Most calves slaughtered are used for meat in processed products.

With its highly diversified terrain and varied climate, New York also supports hefty crops of fruits and vegetables.

The 1969 apple crop—855 million pounds of McIntosh, R. I. Greening, Cortland, and other varieties—put New York orchards behind only those of Washington.

Apple production in New York is generally divided between fresh apples along the Hudson River Valley in the east and processing apples grown in the Lake Ontario area in the western part of the State.

Grapes—another major Empire fruit—are being produced in ever greater quantity in response to rapidly rising wine production. Vineyards on the gentle slopes of Lake Erie and the Finger Lakes produce equally large crops of grapes for juice and wine.

Statistician Bair believes that a fruit tree survey he will conduct soon will show an increase in vine numbers over 5 years ago. In the last 3 years, he reports, three-fourths of New York's vineyards have mechanized harvest with highboy tractors that paddle grapes off the vine with fiber glass bats.

Mechanized harvest is also catching on fast in cherry orchards, too.

Long Island, with its sandy soils, high water table, and moderate ocean air, is an important area for intensive potato production.

Four muck soil regions—including Orange County not far from New York City—are also big producers of onions, lettuce, celery, and potatoes. Other upstate areas grow snap beans and sweet corn.

New York's farmers also planted nearly 12,000 acres in 1969 to horticultural crops: sod, nursery items, crops under glass, flower bulbs, and seeds. Meanwhile, city dwellers brighten their lives with cut flowers from a large floral industry.

In addition to foods and flowers, some Empire farmers also harvest another big cash crop—FUN. Farm recreation resorts—vacation ranches, campgrounds, riding stables, ski slopes—are a big attraction for New York's 18 million residents and a profitable sideline for the men who run them.



MEDICAL MATTERS

Isolation, low incomes, and inadequate health facilities mean rural people—especially the elderly and needy—may not get the medical care they need.

Doctors and other medical professionals, for example, seem to shy away from locating in rural areas. They're attracted to urban areas, chiefly, for wider professional opportunities and better income prospects. Further, many already practicing in rural areas are either elderly or considering leaving rural life to practice in the city.

For example, the number of doctors in isolated low-income areas declined six times faster than the population in those areas in the 1950's. Compounding the problem, few medical specialists have set up practices in rural areas, so the local general practitioner may have to administer complicated specialized treatment. His urban counterpart, however, generally has a roster of specialists he can quickly call.

Rural hospitals present a paradox. Compared with the population, there are more hospitals in sparsely settled, low-income areas than in more urbanized counties. But, the rural hospitals tend to be smaller, frequently provide no outpatient or extended care, and have limited staffs and equipment. Thus, rural hospitals can have trouble meeting recognized standards.

Only 8 percent of the rural population is farther than 25 miles from a hospital with at least 25 beds—so, simple physical distance is not a major problem. But poor roads and longer distances create a special need for rural ambulance crews to be trained to give on-the-spot aid. Yet often only a small amount is allowed in local rural budgets for hiring adequately trained ambulance crews.

What are some ways to improve rural health?

Rural people should know what medical assistance is available to them, and they should keep up with community plans for expanded medication. After all, health services won't help much if people don't know they exist.

Building bigger, better multicounty medical facilities—rather than small centers in every county—would improve care. So, too, would placing more emphasis on cheaper, quicker means of getting patients with complicated disorders to large centers with specialized staffs and a variety of equipment and services.

NEW INDUSTRY

A new manufacturing plant in a small town is no cure-all for community fiscal woes. In fact, the plant could cost a local government more for additional services than it'll contribute in tax revenues.

A team of economists studied the fiscal impact of new industries on five local governments in Kentucky.

In most cases, the new plants were some financial drain on their communities and here's why:

—Some were granted property tax concessions to lure them to the area or else the plants were owned by the local government and so weren't taxable.

—Providing services for the new employees and their families cost the local governments more than these families paid in added taxes. The greatest added cost was for schooling.

Does all this mean small towns should shun new industry as a means of community development?

No indeed, say the economists. Their study dealt only with local government costs and revenues. And a new industry may have beneficial effects on small town residents that far outweigh the burden of extra community costs.

However, local citizens should consider carefully the likely impact of a new plant on their community and plan ahead to minimize the bad effects and maximize the good ones.



Rolling Andes' foothills give way to rich fertile Colombian river valleys.

THE NEW NUMBERS IN SOUTH AMERICA: COLOMBIA SEEKS AN AGRICULTURAL ESTIMATE

Compiling an official set of data for Colombia's agriculture poses lots of problems we don't face here in the United States. That's the report of the four USDA statisticians who are helping the Colombian government with this task.

Till now, the country has never had an official set of agricultural numbers. But it has had plenty of unofficial statistics—some contradictory—collected by different government and private groups.

To straighten out the numbers, Colombia's Ministry of Agriculture last year asked USDA for some technical help. Four experts, each a specialist in a different aspect of data collection and analysis, were assigned the job: Thomas Cryer, SRS, John Fliginger, ERS, Galen Hart, SRS, and Wilbert Walther, SRS.

The USDA team is pioneering a

new approach in technical assistance. Members don't live in Colombia—but they're on call to fly there when needed.

The big advantage of doing things this way: USDA can assign a battery of specialists to the project—yet use their talents Stateside, too.

Walther and Fliginger, for example, are just back from a 3-week trip in which they helped the Colombia's central statistical agency wind up the first phase of its agricultural statistics program.

On October 6, 1970, the agency published its first crop report which included official estimates of acreage harvested, yields per acre, and total production for 10 important crops during 1960-69.

Government statisticians also made preliminary estimates of acreage, yields, and production for the first half of



Colombia has highly mechanized large modern farms and traditional small primitive ones; however, few middle sized or partly mechanized farms fill the gap between the two extremes.



1970 and forecasts for the second half for each of the 10 crops.

Plans were developed to issue a crop report each April and October. Next year's plans also call for adding additional crops to the estimating program and to provide more detail on the crops now estimated. Also the development of a monthly cattle slaughter program is well along. Research is also under way for developing cattle inventory statistics.

Another big step—and it is very complicated—is an agricultural census to be taken late this year and early next.

Galen Hart and Tom Cryer, who are advising on this phase of the project, say the census “won’t be fancy.” The aim is completeness, not complexity, of coverage. And making a complete count will be a very difficult job.

Primitive Indians still abound in certain sections of Colombia—and the enumerator who hopes to secure information will need to take with him a

missionary or someone the Indians recognize when he makes his count.

Pack burros and “Johnsons” (motor boats) are needed to reach many areas.

Tom Cryer spent two weeks during October in Colombia providing assistance in the development of computer programs to process the census.

Target date for completion of Colombia’s agricultural census is the close of 1971. But even then, the four USDA statisticians’ job will not be finished.

Goal of the Colombia project is a complete statistical package that will provide government planners with all the data they need for agriculture. This is a job that could take 5, 6 years, even longer.

But the USDA men are very optimistic about the program’s results. So far nearly everything has gone along as scheduled. All of the specialists are hopeful that, by this decade’s end, Colombia will have one of the best sets of agricultural statistics in all of South America.



LAUNCHING A NEW FOOD PRODUCT

"An experimental dry whole milk powder, developed by the U.S. Department of Agriculture, won favor among over 300 homemakers in Alexandria, Va., who tried it in their homes.

"In personal interviews conducted for USDA's Statistical Reporting Service, it was rated equal to or better than regular whole milk by 4 homemakers in 10 when they considered their overall household needs and preferences."

These two lead-off paragraphs in a USDA press release pretty well sum up the results of a recent study conducted by SRS's Special Surveys Branch. But they don't even begin to hint at the months of work that went into conducting that survey.

All new food products undergo considerable testing before they actually

get to the supermarket shelf. The dry whole milk powder, in this instance, had been tested and retested many times by both trained and untrained taste panels in USDA before home placement tests were considered.

Much research had also been done to establish the packaging and storage conditions necessary for commercial use of the powder.

Once the decision was made to let consumers into the act, the Special Surveys Branch got to work on the details of the home placement test. Their first task was to select the consumers who would test the product.

The city of Alexandria, Va., was chosen mostly for its nearness to the Washington office in charge of the test. Then the members of over 400 Alex-

andria households were contacted to see if they'd cooperate; more than 300 said yes.

Meanwhile, the questions were composed that would ultimately be asked of the consumers who tested the dry whole milk powder. Wording such questions is difficult. They must elicit the reactions and built-in prejudices of the consumers without revealing the questioner's own partialities and hopes for the project.

At the same time, the Agricultural Research Service's Dairy Products Laboratory of the Eastern Utilization Research and Development Division—developer of the test product—was making enough powder for the experiment. And an artist from USDA was designing a green and white label for the can.

A visit with the chosen homemakers was the first step in the actual home placement test. Interviewers questioned these homemakers on their opinions and use of different kinds of milk. Some background information on the family was also obtained—and then a supply of the new dry whole milk product was left with each family.

The homemakers were asked to serve milk made from the powder as a beverage at least once to every member of the family 12 or over who normally drank milk. Each taster was asked to fill out a card that asked for his reactions to both the test milk and regular whole milk as a beverage.

About a week later, the interviewers returned to get the families' reactions. Though household members under age 12 weren't asked to fill out a card, the interviewers asked about these children's opinions, too.

What happened when all the cards were in and all the survey results were analyzed?

The dry whole milk powder had proved to be popular. Most of the 12-and-over tasters thought it tasted fine as a beverage, though they didn't rate it quite as high as regular milk. And

the majority of the under-12 bunch who tried it liked the reconstituted powdered milk just as much or better than fresh milk, according to their mothers' reports.

More than 7 homemakers in 10 said they felt the dry milk offered some distinct advantages: it was easy to store since it required no refrigeration before reconstituting; it was economical since it could last longer than regular milk; and it was good for emergencies.

However, the test did indicate a few drawbacks: mixing time was the big one cited. But very few of the homemakers objected to the foam which appeared on top of the reconstituted test milk. And that's what the ARS developers thought consumers might dislike.

What's right with a new product in the eyes of consumers? What's wrong with it? How can it be improved?

This is what SRS's Special Surveys Branch aims to find out. The answers are crucial to marketing success.

SPUDS

In 1969 Americans ate 118.2 pounds of potatoes apiece, compared with 108.4 pounds in 1960. Most of the credit for the upswing goes to greater use of potatoes in frozen and dehydrated products.

	Potatoes: pounds eaten per capita		
	<i>Fresh</i>	<i>Processed</i>	<i>Frozen</i>
1960.....	84.7	17.1	6.6
1969.....	63.4	30.3	24.5

—Frozen potato use grew so much during the 1960's that by 1969 the total quantity of potatoes frozen slightly exceeded all other vegetables frozen. Frozen french fries accounted for most of the increase.

—Quick mix dehydrated potatoes also scored a success during the decade. Per capita consumption rose from 5 pounds to 12.1.

ag outlook

Digested from outlook reports of the Economic Research Service.
Forecasts based on information available through December 1, 1970

FEED SUPPLIES REDUCED . . . Corn leaf blight and dry weather cut the total feed grain crop 15.6 million tons from 1969's near-record high. The crop, at 159 million tons, exceeds all others before 1967; however, it is short in terms of total use, which has risen sharply the past few years. With carryovers counted in, the total supply stands at around 207¼ million tons.

CORN made more news than any other crop last year. The effect blight and bad weather had on the crop shows in the SRS estimates:

		% change from 1969
Farmers' planting intentions	66.7 million acres....	+4
(March 1).		
Projected production (March 1).....	4.8 billion bu.....	+5
Estimated planted acreage (July 1)....	67.4 million acres....	+5
July forecast (July 1).....	4.8 billion bu.....	+5
Crop forecast (August 1).....	4.7 billion bu.....	+3
Crop forecast (September 1).....	4.4 billion bu.....	-4
Special crop forecast (Septem- ber 23).	4.2 billion bu.....	-9
Crop forecast (October 1).....	4.2 billion bu.....	-9
Crop forecast (November 1).....	4.1 billion bu.....	-10
Annual summary (December).....	4.1 billion bu.....	-10

MEAT . . . Consumer demand for meat will remain strong through 1971, but it's not expected to rise much from 1970's levels. Even so, livestock prices may average somewhat lower than last year, because fairly large gains in red meat appear on the horizon. Sharply lower hog prices during 1971's first half will account for much of the price decline.

CATTLE INVENTORY . . . Several factors point to inventory gains: (1) the 1970 calf crop was about 760,000 larger than the year previous and was large in relation to cattle and calf slaughter;

(2) Cattle slaughter for 1970 totaled nearly as large as in 1969, but calf slaughter was down more than half a million head; (3) Imports of feeder cattle have been up, another contribution to the boost.



HOG SLAUGHTER . . . Sharply advanced hog slaughter looks likely during January–June. On December 1, 1970, hog producers indicated that the number of sows farrowing June–November 1970 would be up 21%.



BROILERS . . . Output during 1971's first half will probably fall slightly below that of a year earlier. Latest figures suggest that broiler chick placements for January–February 1971 slaughter may be reduced 3% from a year earlier.



EGGS . . . Production is expected to gain over year earlier levels in 1971's opening half. The laying flock on December 1, 1970 totaled 326 million, 1.2% more than a year before. The laying flock will contain more pullets and fewer hens through mid-1971 than through mid-1970. Because of a younger flock, the rate of lay will gain, and it will average above a year earlier, particularly during 1971's first half.



TURKEYS . . . Turkey breeder flock owners in 15 States, with about four-fifths of all turkey breeder hens, indicated intentions of keeping 10% more of these birds for the 1971 hatching season than a year earlier. Owners intend to keep 19% more light and 9% more heavy breed hens.



WHEAT EXPORTS . . . The world's wheat trade rose to almost 2 billion bushels in 1969/70, after hitting a low of 1.7 billion in 1968/69. U.S. shipments are expected to reach 725–750 million bushels in 1970/71, topping the 606 million of last year. Curtailed world production and possible wheat feeding expansion prompted the general upswing in trade.



WHEAT CARRYOVER, for all classes, will likely be reduced next summer. For soft wheats, stocks will probably be smaller than the 23 million bushels of red and the 30 million of white of June 1970. Hard spring wheat stocks will be off sharply from the 93 million bushels of June 1970. Durum stocks will also dip. Hard winter wheat stocks may drop 100 million bushels because of heavy exports and expanded feeding.

FARM EXPORTS TO TOP \$7 BILLION . . . Exports of U.S. farm products may reach \$7 billion this fiscal year, substantially above 1969/70's \$6.6 billion and the previous high, \$6.8 billion in 1966/67. Exports have been helped by continued economic growth in Western Europe and Japan, our best customers. The value of U.S. grain exports will probably rise a tenth above last year's \$2.3 billion. Oilseed and oilseed product exports may expand a fifth above 1969/70's record high, \$1.7 billion.

THE FOOD DOLLAR . . . The farmer's share of the consumer's food dollar is expected to average 38¢ during the first half of the year.

STATISTICAL BAROMETER

Item	1957-59 average	1969	1970—latest data available	
Farm output, total	100	121	121	December
Crops	100	118	118	December
Livestock	100	121	124	December
Prices received by farmers	100	114	116	December
Prices paid, interest, taxes, wage rates	100	127	135	December
Parity ratio (1910-14=100)	—	74	67	December
Consumer price index, all items	100	128	138	November
Food	100	126	132	November
Disposable personal in- come (\$ bil.)	321.5	631.6	693.0	(³)
Expenditures for food (\$ bil.)	66.3	103.6	114.6	(³)
Share of income spent for food (percent)	20.6	16.5	16.5	(³)
Farm food market basket: ¹				
Retail (\$)	938	1,173	1,211	November
Farm value (\$)	388	477	448	November
Farmers' share of retail cost, percent	39	41	37	November
Realized gross farm in- come (\$ bil.)	36.5	54.6	56.5	(³)
Production expenses (\$ bil.)	24.9	36.6	40.8	(³)
Realized net farm income (\$ bil.)	11.6	16.0	15.7	(³)
Agricultural exports (\$ bil.)	4.2	² 6.6	0.7	November
Agricultural imports (\$ bil.)	3.9	² 5.5	0.4	November

¹ Average quantities per family and single person household bought by wage and clerical workers 1960-61 based on Bureau of Labor Statistics figures.

² July 1, 1969-June 30, 1970.

³ Annual rate, seasonally adjusted, third quarter.



HAPPINESS IS A STRESSLESS SWINE

Man isn't alone in feeling stress from the pressures of today's world. Pigs, at least some pigs, are susceptible to stress, too. And for them it can be fatal.

Porcine stress syndrome, as the sickness is termed, isn't associated with any known infectious disease. Rather, it's a shock-like reaction that sets in when any one of a number of things upsets susceptible animals.

Fighting is probably the most common cause. Whenever strange hogs are mixed there's a struggle to establish the social order of the pen—and

stress-prone hogs have on occasion died after 2 minutes of such upheaval.

But sudden deaths can result from minor events, too. Moving pigs from confinement housing to new quarters is enough to cause some animals stress, as is transporting other pigs from farm to market. Many porcine stress deaths will follow a sudden rise in temperature or a rapid change from a cold to warm environment.

How can you prevent stress in your animals?

The best bet is to handle carefully any animals that are easily excited and have either muscle or tail tremors. Researchers have come to recognize these as classical signs of stress.

Whenever possible, don't mix excitable pigs with strange hogs. And try to avoid overcrowding pigs on trucks going to market.

Pigs bred to produce a high ratio of lean to fat are particularly stress-prone. It may be that genetic selections for the efficient pig also resulted in selection for lower secretions of adrenal hormones—and the lack of adaptability to stress conditions.

How can you recognize stress if, even with all precautions, it occurs?

Look first for breathing difficulty. Most pigs in stress will be breathing heavily through open mouths.

Next you may spot irregularly shaped alternating areas of blanching and reddening or flushing on the skin.

Lastly, pigs in stress become reluctant to move.

AGRICULTURAL SITUATION

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